

**Amendment and Response**

Serial No.: 09/898,238

Confirmation No.: 7517

Filed: July 3, 2001

For: ISOLATED AND PURIFIED DNA MOLECULE AND PROTEIN FOR THE DEGRADATION OF  
TRIAZENE COMPOUNDS

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also shown in Appendix A with notations to indicate changes made (for convenience, all pending claims are provided in Appendix A).

C2 7. **(Amended)** An isolated and purified protein which has the amino acid sequence shown in Figure 7 (SEQ ID NO:2).

C3 9. **(Amended)** An isolated and purified atrazine chlorohydrolase protein encoded by a DNA molecule that hybridizes to DNA complementary to DNA having the sequence shown in Figure 6 (SEQ ID NO:1), beginning at position 236 and ending at position 1655, under the stringency conditions of hybridization in buffer containing 0.25 M Na<sub>2</sub>HPO<sub>4</sub>, 7% SDS, 1% BSA, 1.0 mM EDTA at 65°C, followed by washing with 0.1% SDS and 0.1x SSC at 65°C.

10. **(Amended)** An isolated and purified protein encoded by a DNA molecule having the nucleotide sequence shown in Figure 6 (SEQ ID NO:1) beginning at position 236 and ending at position 1655.

C4 24. **(Amended)** An isolated and purified protein that converts atrazine to hydroxyatrazine, wherein the protein comprises an amino acid sequence encoded by a DNA molecule having a complement that hybridizes to a DNA having the sequence shown in Figure 6 (SEQ ID NO:1), beginning at position 236 and ending at position 1655, under the stringency conditions of hybridization in buffer containing 0.25 M Na<sub>2</sub>HPO<sub>4</sub>, 7% SDS, 1% BSA, 1.0 mM EDTA at 65°C, followed by washing with 0.1% SDS and 0.1x SSC at 65°C.

25. **(Amended)** An isolated and purified protein and biologically active derivatives thereof, wherein the protein and the biologically active derivatives thereof convert atrazine to hydroxyatrazine, wherein the protein and the biologically active derivatives thereof comprise an amino acid sequence encoded by a DNA molecule having a complement that hybridizes to a

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C4  
DNA having the sequence shown in Figure 6 (SEQ ID NO:1), beginning at position 236 and ending at position 1655, under the stringency conditions of hybridization in buffer containing 0.25 M  $\text{Na}_2\text{HPO}_4$ , 7% SDS, 1% BSA, 1.0 mM EDTA at 65°C, followed by washing with 0.1% SDS and 0.1x SSC at 65°C.

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C5  
27. **(Amended)** An isolated and purified protein and biologically active derivatives thereof, wherein the protein and the biologically active derivatives thereof convert atrazine to hydroxyatrazine, wherein the protein and the biologically active derivatives thereof comprise an amino acid sequence having greater than about 80% sequence identity to the amino acid sequence depicted at SEQ ID NO:2.

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